UK NEQAS
Leucocyte Immunophenotyping

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

CD34 Stem Cell Programme

All Participant Report

Sample - 220

Distribution - 151605

Participant ID - 42981

Date Issued - 23 November 2015

Closing Date - 11 December 2015

Machine Used - Facscanto II

Trial Comments

The CD34 trial 151604 was issued to 320 participants for flow cytometric enumeration of CD34+ stem cells.

Sample Comments

The sample was manufactured by UK NEQAS using stabilised CD34+ samples and stabilised leucodepleted blood

Absolute Values Results and Performance

Please note: Performance monitoring for this programme is on absolute values only. Percentage results are shown for information purposes only.

Cell Population	Your Results (cells/µL)	Robust Mean (cells/µL)	Robust SD (cells/µL)
CD34 Absolute Values	76.00	182.51	19.28

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Absolute Values	-5.52	Critical	0	2	9

Percentage Values Results and Performance

Cell Population	Your Results %	Robust Mean %	Robust SD %
CD34 Percentage Values	2.70	6.23	0.65

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Percentage Values	-5.43	Critical	1	6	4

***z Score Limits Definitions**

Please note the scale below is applicable to the tables above and to the z score histograms and Shewhart control charts that follow. It is not applicable to the Cusum control charts.

Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

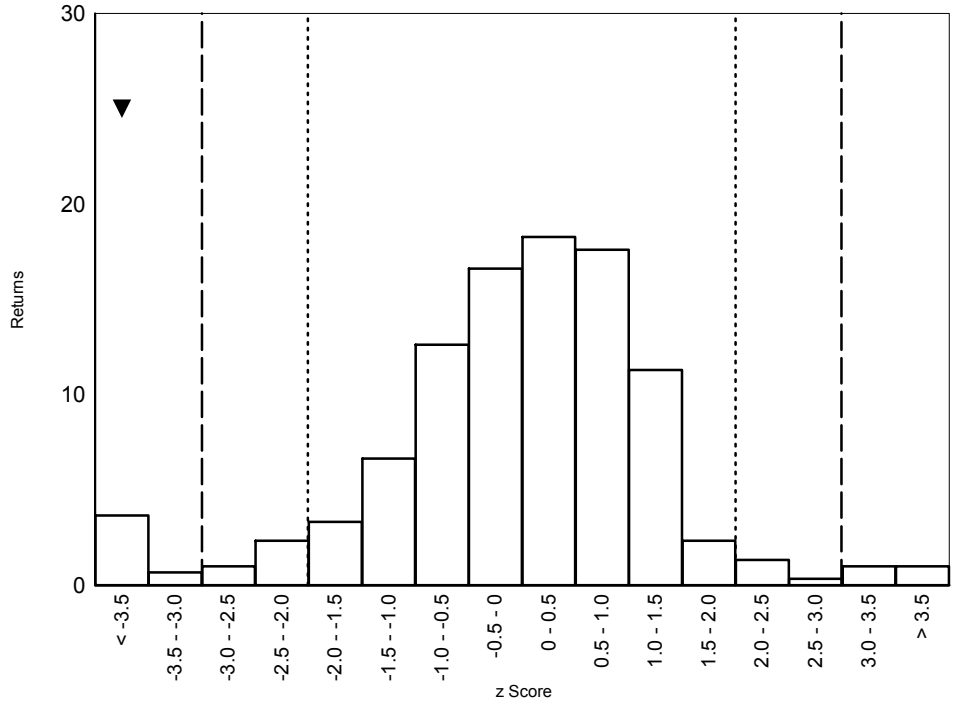
CD34 Stem Cell Programme

Sample - 220

Histograms of Participant z Scores

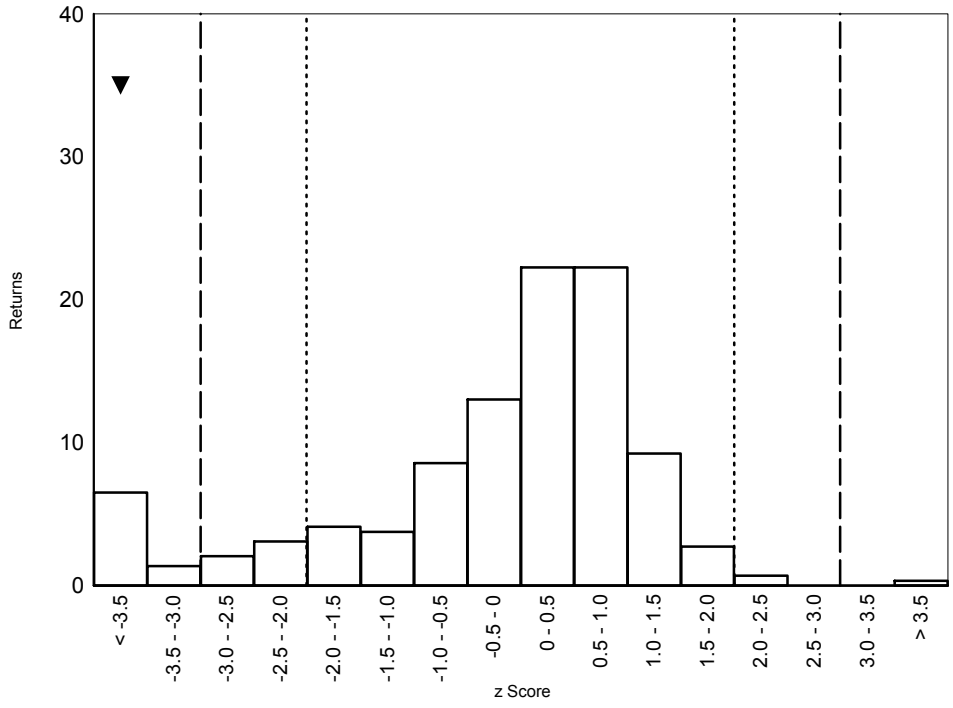
Absolute Values (cells/µL)

Please note ▼ denotes your result



Percentage Values (%)

Please note ▼ denotes your result



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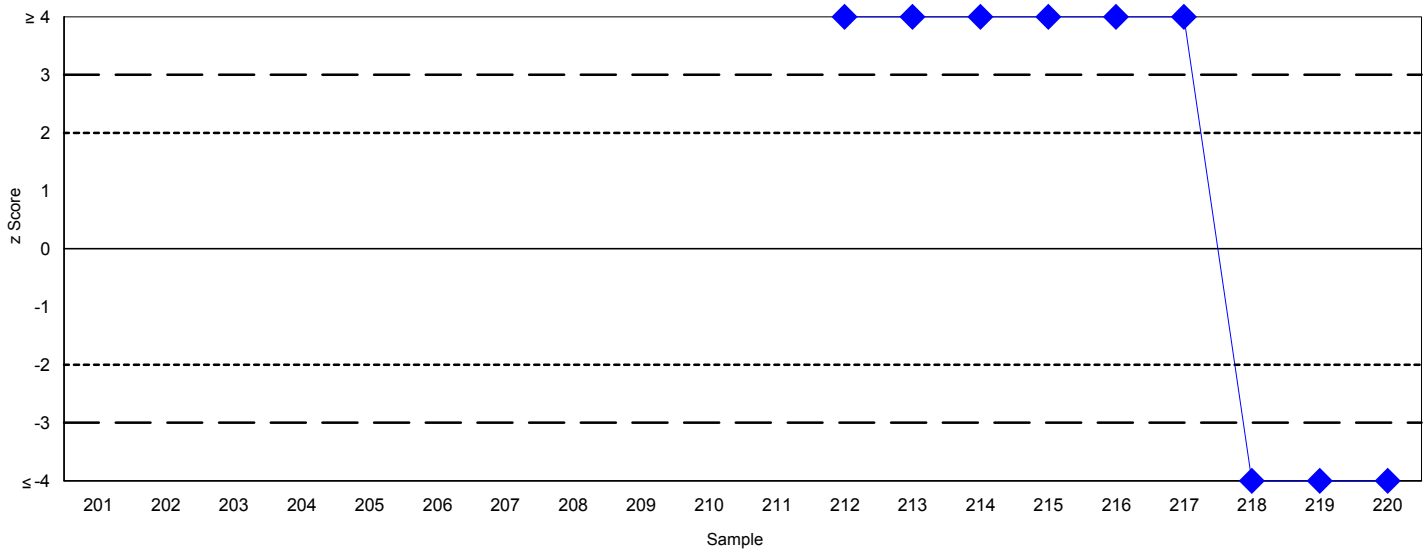
CD34 Stem Cell Programme

Sample - 220

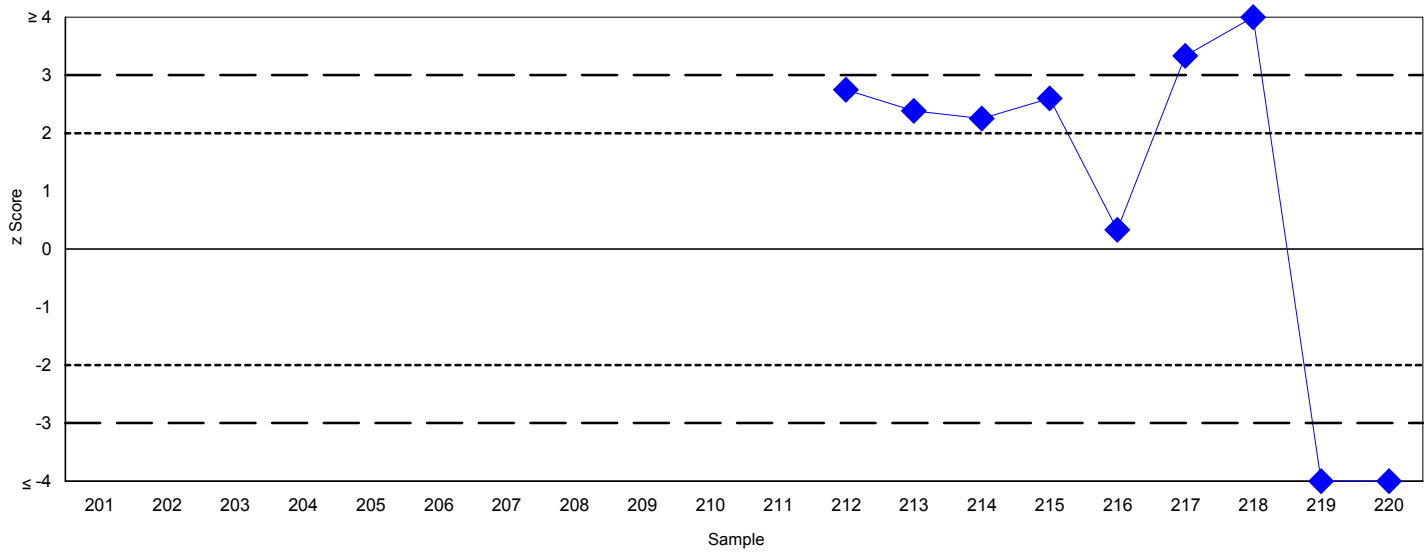
Shewhart Control Charts

(Please note each data point represents a single sample)

Absolute Values (cells/µL)



Percentage Values (%)



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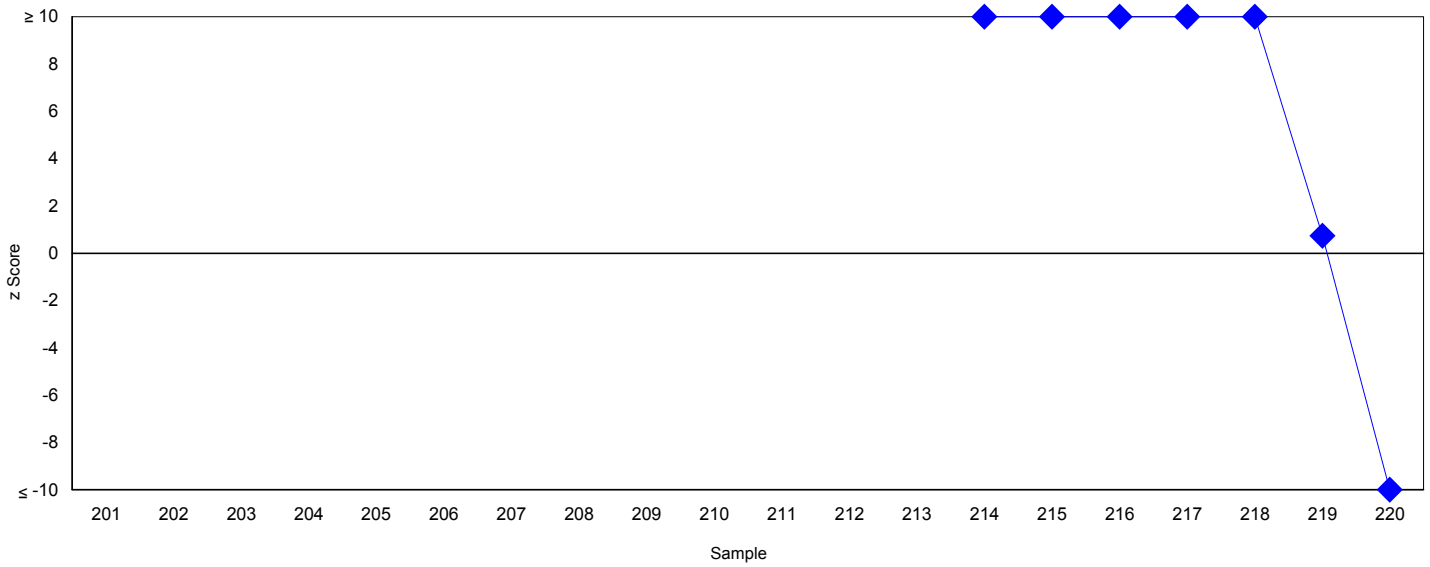
CD34 Stem Cell Programme

Sample - 220

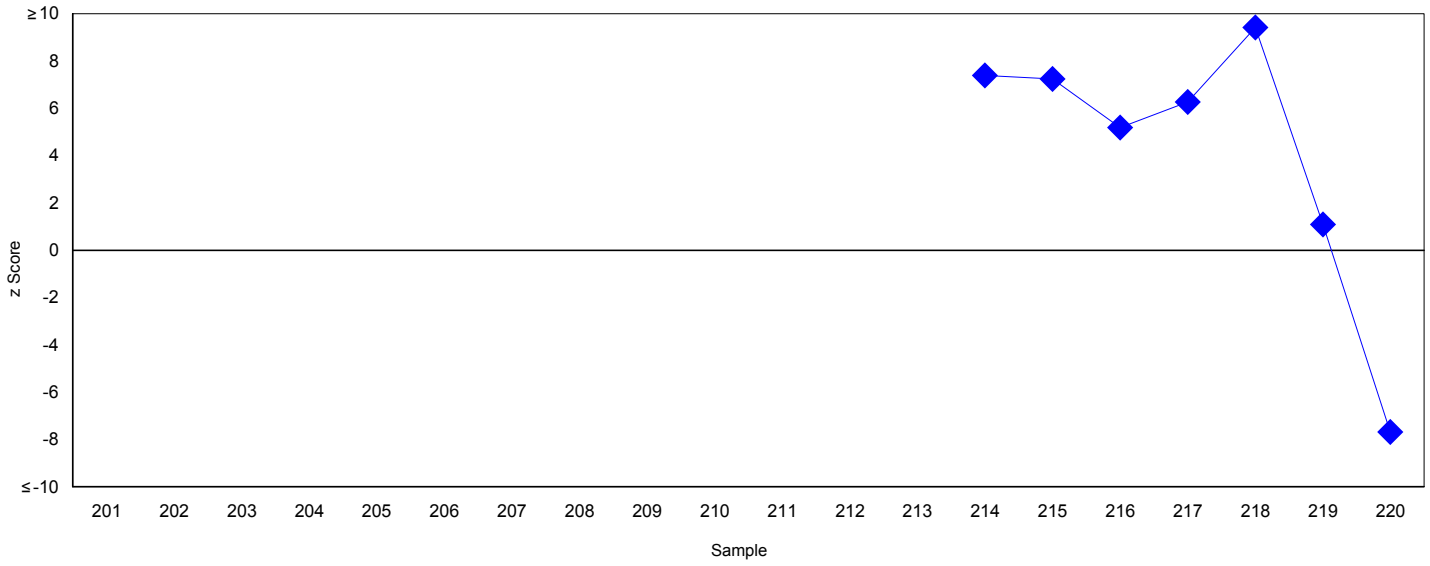
Cusum Control Charts

(Please note each data point represents the sum of the z scores of the current sample and the two previous samples)

Absolute Values (cells/µL)



Percentage Values (%)



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CD34 Stem Cell Programme

Sample - 220

Platform Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
FLOW COUNT	79	182.06	19.33	78	6.20	0.75
HAEMATOLOGY ANALYSER WBC	34	188.96	23.61	33	6.35	0.56
TRUCOUNT	158	183.99	18.50	149	6.25	0.61

Lysing Method Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Ammonium Chloride (NH4CL)	124	185.00	19.10	120	6.27	0.62
Facslyse	25	184.58	27.51	24	6.29	0.57
Pharmlyse	54	183.72	20.05	49	6.11	0.59
Stem Kit Lyse	52	180.08	18.90	50	6.37	0.75

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
PE	285	183.31	20.13	273	6.26	0.64

Flow Cytometer Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Facscalibur	44	176.84	21.97	41	5.82	0.62
Facscanto	20	184.65	21.09	-	-	-
Facscanto II	115	187.82	16.93	112	6.43	0.53
FC 500.	52	181.56	20.89	51	6.05	0.90
Navios	43	180.60	19.20	41	6.38	0.55

Gating Strategy Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
BD STEM CELL ENUMERATION KIT	53	185.77	15.18	52	6.46	0.49
ISHAGE	201	181.87	21.78	191	6.17	0.67
STEM KIT	31	183.95	17.27	30	6.45	0.64

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CD34 Stem Cell Programme

Sample - 221

Distribution - 151605

Participant ID - 42981

Date Issued - 23 November 2015

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Trial Comments

The CD34 trial 151604 was issued to 320 participants for flow cytometric enumeration of CD34+ stem cells.

Sample Comments

The sample was manufactured by UK NEQAS using stabilised CD34+ samples and stabilised leucodepleted blood

Absolute Values Results and Performance

Please note: Performance monitoring for this programme is on absolute values only. Percentage results are shown for information purposes only.

Cell Population	Your Results (cells/µL)	Robust Mean (cells/µL)	Robust SD (cells/µL)
CD34 Absolute Values	5.50	116.83	13.34

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Absolute Values	-8.35	Critical	0	2	10

Percentage Values Results and Performance

Cell Population	Your Results %	Robust Mean %	Robust SD %
CD34 Percentage Values	2.60	5.39	0.59

Cell Population	z Score*	Performance Status for this Sample	Performance Status Classification Over 12 Sample Period		
			Satisfactory	Action	Critical
CD34 Percentage Values	-4.73	Critical	1	6	5

***z Score Limits Definitions**

Please note the scale below is applicable to the tables above and to the z score histograms and Shewhart control charts that follow. It is not applicable to the Cusum control charts.

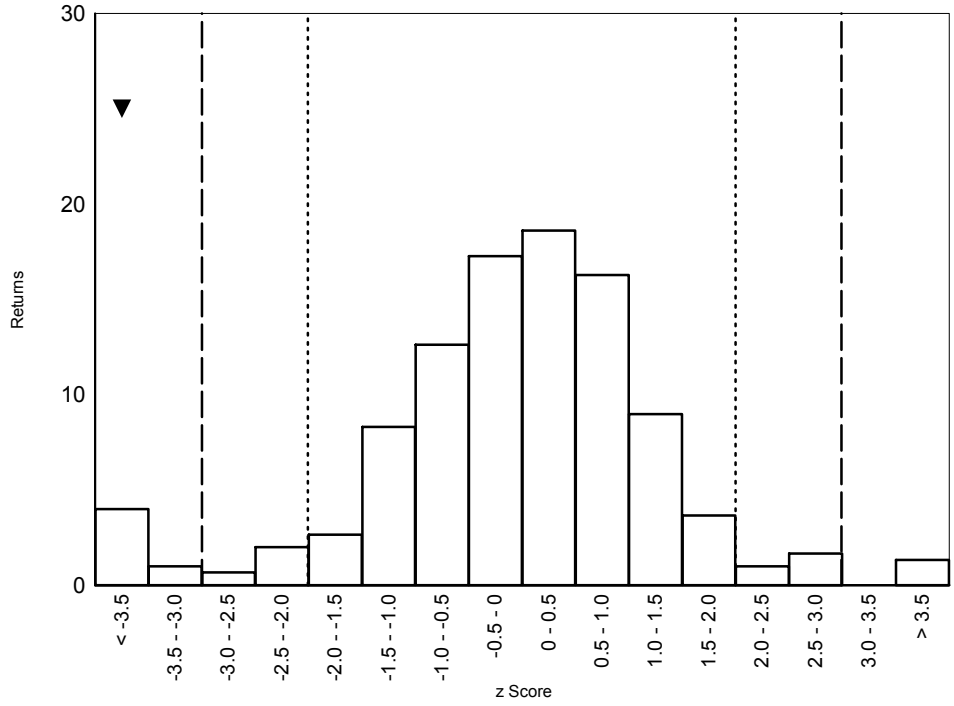
CD34 Stem Cell Programme

Sample - 221

Histograms of Participant z Scores

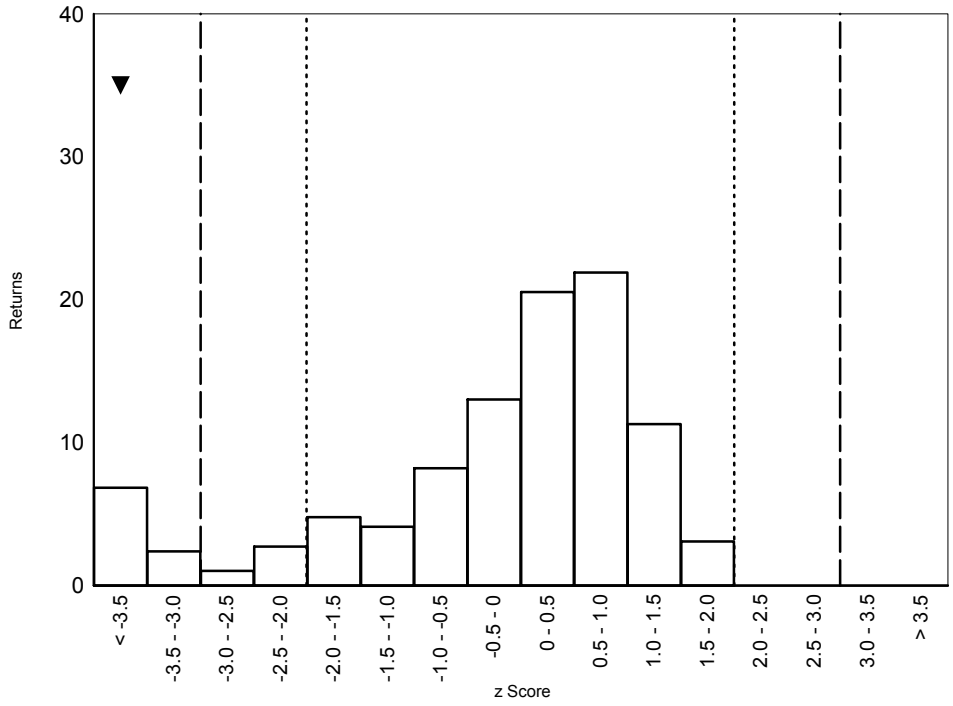
Absolute Values (cells/µL)

Please note ▼ denotes your result



Percentage Values (%)

Please note ▼ denotes your result



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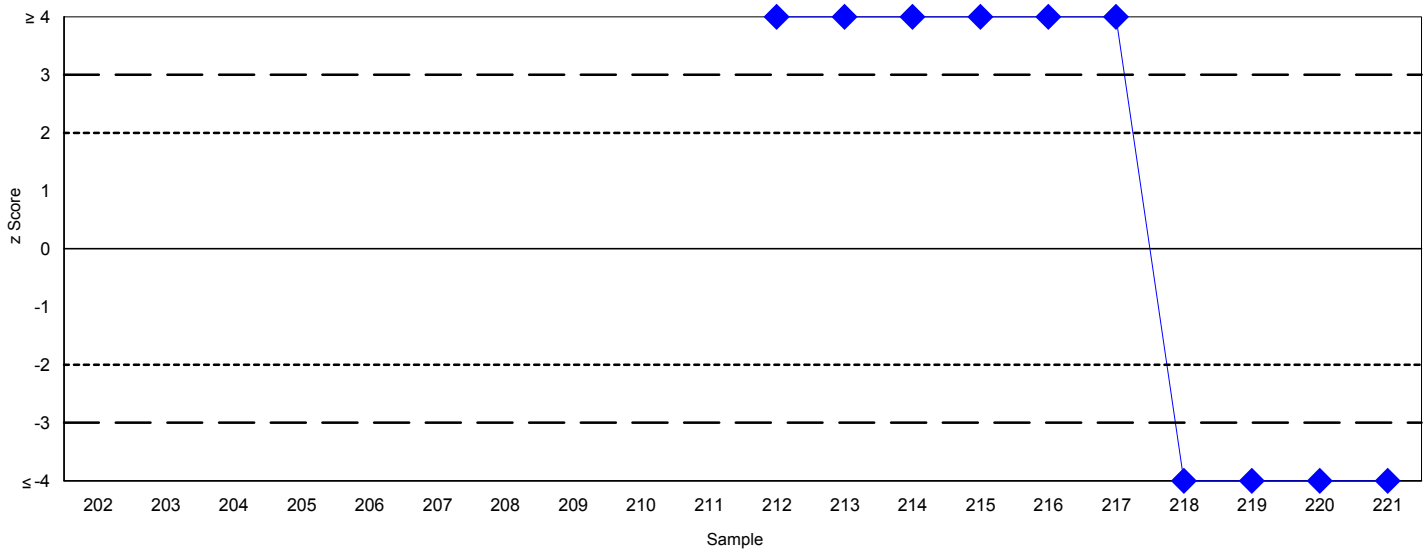
Sample - 221

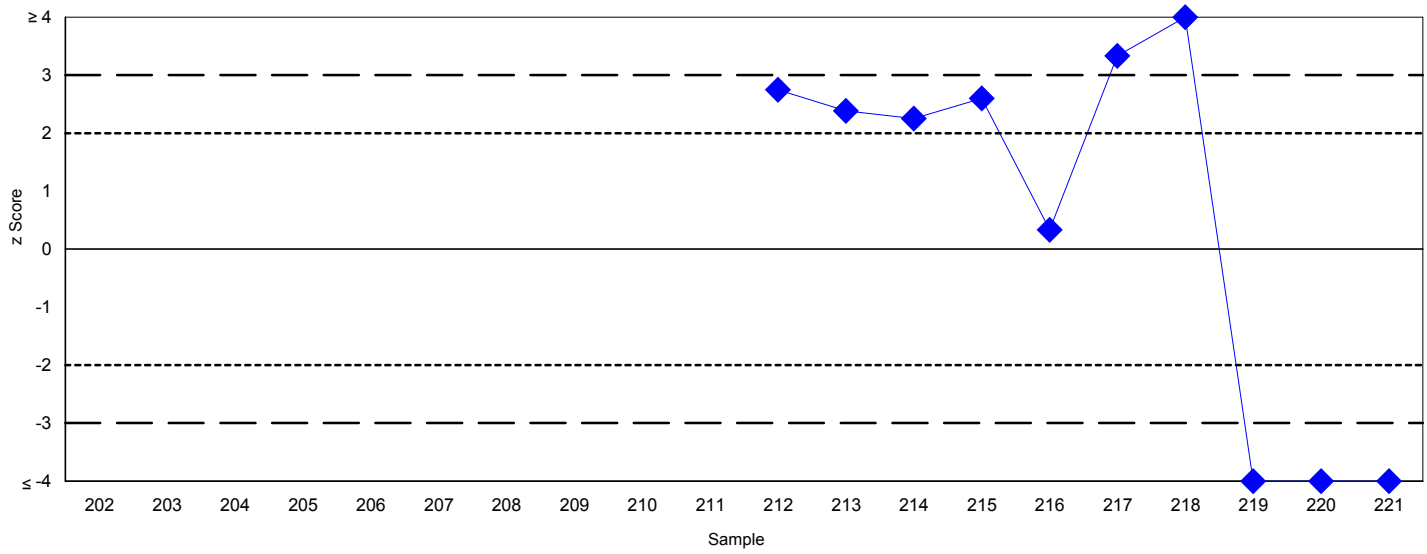
Shewhart Control Charts

(Please note each data point represents a single sample)

Absolute Values (cells/µL)



Percentage Values (%)



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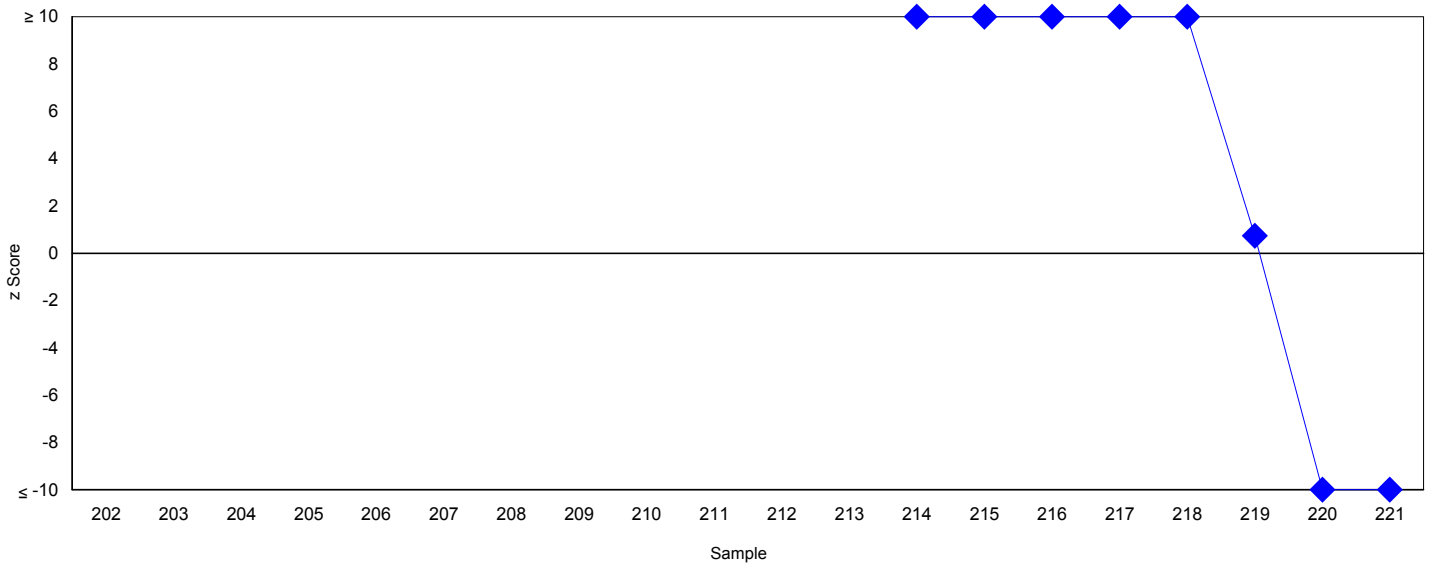
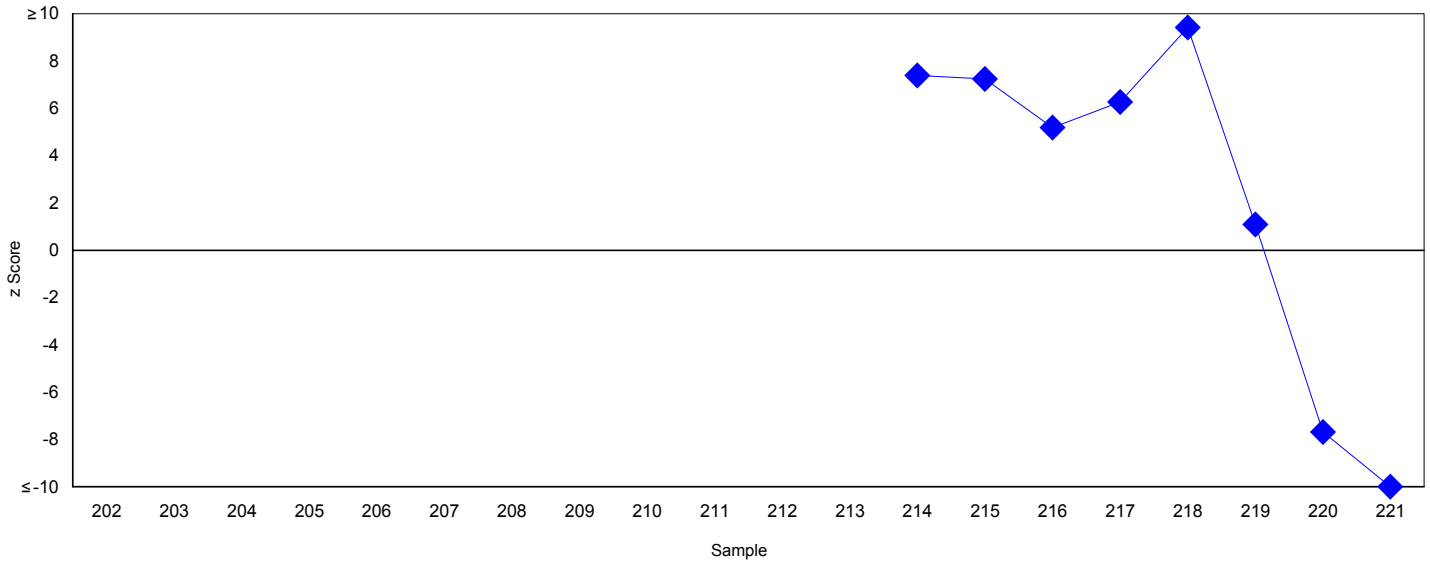
Cusum Control Charts

(Please note each data point represents the sum of the z scores of the current sample and the two previous samples)

Absolute Values (cells/µL)



Percentage Values (%)



CD34 Stem Cell Programme

Sample - 221

Platform Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
FLOW COUNT	79	116.75	15.05	78	5.38	0.71
HAEMATOLOGY ANALYSER WBC	32	121.21	16.34	33	5.46	0.65
TRUCOUNT	156	117.76	12.36	148	5.40	0.55

Lysing Method Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Ammonium Chloride (NH4CL)	121	119.20	13.28	119	5.42	0.59
Facslyse	23	119.34	18.22	24	5.36	0.74
Pharmlyse	54	116.20	13.06	49	5.26	0.62
Stem Kit Lyse	51	113.63	13.59	50	5.44	0.76

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
PE	279	117.36	13.82	271	5.41	0.59

Flow Cytometer Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
Facscalibur	44	114.79	13.18	40	5.04	0.64
Facscanto II	113	119.46	12.85	112	5.53	0.47
FC 500.	50	118.51	12.52	51	5.24	0.87
Navios	42	114.79	14.57	41	5.50	0.56

Gating Strategy Specific Statistics

(Please note only groups of >20 returns are displayed)

Method	Absolute Count Values (cells/µL)			Percentage Values		
	Returns	Robust Mean	Robust SD	Returns	Robust Mean	Robust SD
BD STEM CELL ENUMERATION KIT	53	119.21	9.66	52	5.60	0.47
ISHAGE	195	116.55	15.48	190	5.34	0.61
STEM KIT	31	116.90	14.40	30	5.43	0.78

Information with respect to compliance with standards BS EN ISO/IEC 17043:2010

4.8.2 a) The proficiency testing provider for this programme is:
UK NEQAS for Leucocyte Immunophenotyping
Pegasus House, 4th Floor Suite
463A Glossop Road
Sheffield, S10 2QD
United Kingdom
Tel: +44 (0) 114 267 3600, Fax: +44 (0) 114 267 3601
e-mail: nicola.rose@ukneqasli.co.uk

4.8.2 b) The coordinators of UK NEQAS LI programmes are Prof David Barnett and Mr Liam Whitby.

4.8.2 c) Person(s) authorizing this report:
Prof David Barnett, Director or Mr Liam Whitby, Operations Manager of UK NEQAS LI

4.8.2 d) No activities in relation to this EQA exercise were subcontracted.

4.8.2 g) The UK NEQAS LI Confidentiality Policy can be found in the Quality Manual which is available by contacting the UK NEQAS LI office. Participant details, their results and their performance data remain confidential unless revealed to the relevant NQAAP when a UK participant is identified as having performance issues.

4.8.2 i) All EQA samples are prepared in accordance with strict Standard Operational Procedures by trained personnel proven to ensure homogeneity and stability. Where appropriate/possible EQA samples are tested prior to issue. Where the sample(s) issued is stabilised blood or platelets, pre and post stability testing will have proved sample suitability prior to issue.

4.8.2 l), n), o), r) & s) Please refer to the UK NEQAS LI website at www.ukneqasli.co.uk for detailed information on each programme including the scoring systems applied to assess performance (for BS EN ISO/IEC 17043:2010 accredited programmes only). Where a scoring system refers to the 'consensus result' this means the result reported by the majority of participants for that trial issue. Advice on the interpretation of statistical analyses and the criteria on which performance is measured is also given. Please note that where different methods/procedures are used by different groups of participants these may be displayed within your report, but the same scoring system is applied to all participants irrespective of method/procedure used.

4.8.2 m) We do not assign values against reference materials or calibrants.

4.8.2 q) Details of the programme designs as authorized by The Steering Committee and Specialist Advisory Group can be found on our website at www.ukneqasli.co.uk. The proposed trial issue schedule for each programme is also available.

4.8.2 t) If you would like to discuss the outcomes of this trial issue, please contact UK NEQAS LI using the contact details provided.